

# Superfund Remedial Investigation Fact Sheet

## SCRDI Bluff Road Site Columbia, South Carolina



Region IV

October 1989

### Introduction

This fact sheet on the SCRDI Bluff Road Superfund Site (Bluff Road Site) in Richland County, South Carolina has been prepared by the Region IV Office of the U.S. Environmental Protection Agency (EPA). The purpose of the fact sheet is to inform interested citizens and local officials of the nature and status of EPA's activities at the site. Specifically, the fact sheet provides a brief background and history of the site and describes the results of the Remedial Investigation (RI) recently performed at the site. Opportunities for public involvement are also discussed. This is the third in a series of fact sheets on the Bluff Road Site. Copies of previous fact sheets can be found in the information repository listed at the end of this fact sheet.

### Site Description and History

The Bluff Road Site consists of an abandoned chemical waste recycling and disposal area situated on about four acres, two acres of which were used for waste material storage. It is located approximately 10 miles southeast of Columbia, South Carolina, on the north side of Bluff Road, opposite the Westinghouse Nuclear Fuel Plant main entrance. The Congaree River lies approximately four miles south of the site. (See Figures 1 and 2)

An acetylene manufacturer occupied the property prior to its use as a solid and hazardous waste facility. The Columbia Organic Chemical Company (COCC) first stored solid and hazardous wastes at the site in late 1973. South Carolina Recycling and Disposal, Inc. (SCRDI) was incorporated in June 1976 for the purpose of continuing the waste handling and recycling business of COCC, and was essentially the same operation. SCRDI continued to operate the site, without a State permit for chemical waste storage and treatment, until 1982; the South Carolina Department of Health and Environmental Control (SCDHEC) denied the company's application for a chemical waste handling permit in February 1981.

A site investigation conducted by EPA in March 1980 revealed a variety of metals in the soil and water samples on and around the Bluff Road Site. Possible sources of the metals include deteriorated drums, natural soil metals, waste lime from the acetylene manufacturer, and spilled hazardous wastes.

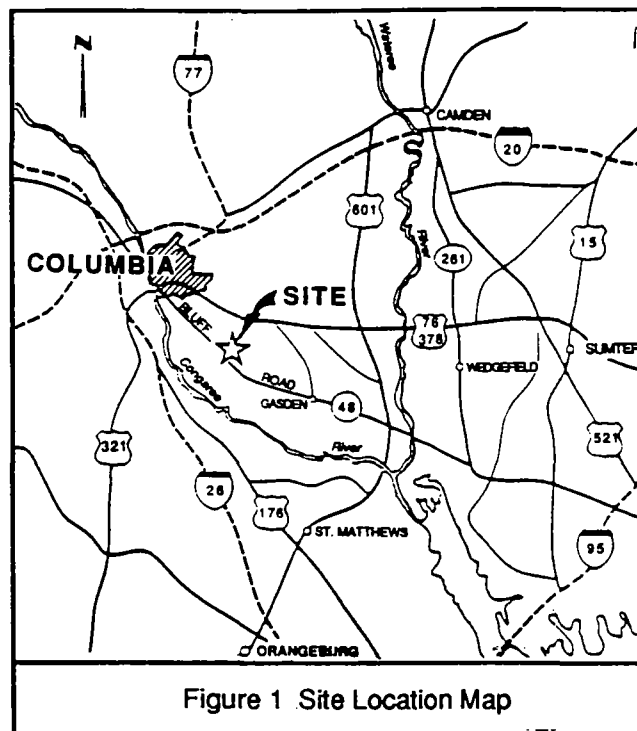


Figure 1. Site Location Map

In October 1981, the Bluff Road Site was placed on EPA's National Priorities List (NPL) of hazardous waste sites eligible for Federal cleanup funds. At the time of NPL listing, approximately 7,200 drums of toxic, flammable, and reactive wastes were stored haphazardly on-site, as were numerous smaller containers of these materials.



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In 1982 and 1983 SCDHEC performed a surface removal action at the site. Contaminated soil and drums of chemicals were removed, shock-sensitive materials at the rear of the site were detonated, and many areas were covered with gravel.

In 1984, SCDHEC began a Remedial Investigation/Feasibility Study (RI/FS) to determine the type, extent, and degree of soil and ground-water contamination on and around the site; samples were collected for chemical analysis in 1985. The RI/FS reverted back to Federal lead when SCDHEC had utilized all of their funding.

As a result of negotiations with potentially responsible parties (PRPs), EPA entered into an Administrative Order on Consent with a group of PRPs on April 21, 1988. This Consent Order provides that, among other things, the RI/FS will be financed and conducted by the PRPs that entered into the Order with EPA, and that the same PRPs are jointly and severally liable for 51.96 percent of the Remedial Design/Remedial Action (RD/RA) costs. The RD/RA entails the planning and execution of the remedy selected from the RI/FS. The RI/FS began in April 1988 and the RI was completed in June 1989.

### **The Superfund Enforcement Process**

With the passage of CERCLA (commonly known as Superfund) in 1980, Congress gave EPA the authority to compel PRPs to clean up hazardous waste sites that may endanger public health or the environment through actual or threatened releases of hazardous substances. PRPs may be:

- Generators of the wastes (those who produced the wastes)
- Any party who contracted for or performed treatment, transport or disposal of the wastes
- Past or present owners or operators of the site.

Wherever possible, in order to make the best use of Superfund, EPA attempts to have the PRPs conduct the site studies, such as the RI/FS and, if needed, perform the actual cleanup of the site. The actions that EPA takes to compel the PRPs to study or clean up a site are collectively called the enforcement process.

Hazardous waste sites with conditions serious enough to be ranked for inclusion on the NPL are given priority by EPA for pursuing enforcement actions and may also qualify for Federal funds for cleanup.

### **Objectives of the Remedial Investigation (RI)**

The Bluff Road RI was performed to accomplish three objectives. These were to:

- Determine the nature and extent of ground water, surface water, soil, and sediment contamination on and adjacent to the site
- Determine and describe on-site and off-site features that could affect the methods of containment or cleanup
- Determine the extent, if any, to which the site poses an imminent hazard to public health or the environment.

### **Findings of the RI**

The objectives of the RI were achieved. Sampling of the soil, surface waters, sediments, ground water, and air was conducted at the Bluff Road Site to better identify the characteristics and extent of contamination resulting from the site that was impacting the environment.

The Bluff Road RI showed that:

- Lagoons and soils on the site are source areas contributing volatile organics to the surficial aquifer or upper level of water-saturated rock and gravel. The total concentration of volatile chemicals in the ground water exceeds 20,000 parts per billion (ppb).
- A contaminant plume approximately 1,000 feet wide has migrated from the site in a southeasterly direction and extends approximately 2,200 feet from the eastern edge of the wet lagoon. The plume apparently has not moved since December 1985.
- Four deep wells (75 to 100 feet) were installed to check for contamination, and to determine the direction of ground water flow. No contamination was found in any of the newly installed wells. Ground water flow is estimated to be in a southern direction toward Bluff Road.
- Soil contamination caused by the presence of organic (carbon containing) chemicals is prevalent in the cleared portions of both the SCRDI and Campbell's properties. In areas used by SCDHEC to store drums at the site during the 1983 removal, the contamination is limited to the top three feet of soil. The SCRDI property itself is contaminated with organics in

the top 11 feet (the water table) from Bluff Road to the wet lagoon area. Metals, PCBs, and pesticide contamination appear to be localized on the site.

- Sediments from both lagoons on the property are heavily contaminated with a variety of organic chemicals and metals, although toxic heavy metals are limited. Water in the wet lagoon is contaminated with metals, although no organic chemicals were found.

### Risk Assessment

A risk assessment also was conducted to evaluate the potential for off-site migration of chemicals from the Bluff Road Site and the impacts, if any, on public health and/or the environment.

Based on current knowledge of the site, the Risk Assessment concluded that no unacceptable levels of public health or environmental risks presently exist. However, in the absence of site remediation, future unacceptable risk levels could result from exposure to contaminated soils and groundwater.

### The Feasibility Study

The next step in assessing the appropriate method and level of cleanup involves performing the Feasibility Study (FS). The FS will include a list of all technologies and alternatives considered along with a detailed review and screening of each. A total of five potential remedial alternative groups will be screened in detail.

They will be listed in the following categories:

- Treatment or disposal at an off-site facility
- Alternatives that attain applicable or relevant standards
- Alternatives that exceed applicable or relevant standards
- Alternatives that do not attain applicable or relevant standards but will reduce the likelihood of present or future threats to the public
- A no-action alternative.

The remedial action to be implemented at the site will be selected from one of these lists of remedial alternatives.

### Next Steps

As a result of the FS findings, EPA will select a preferred remedy for cleanup and will issue this information to the public in a Proposed Plan. After providing an opportunity for a public meeting on the proposed plan, holding a 30-day public comment period, and reviewing comments received, EPA will make its decision. The chosen remedy will be presented in a document called the Record of Decision (ROD). Once the remedial design is prepared, EPA will issue a fact sheet detailing its objectives and components. Additional opportunities for public involvement will be provided throughout the site cleanup process.

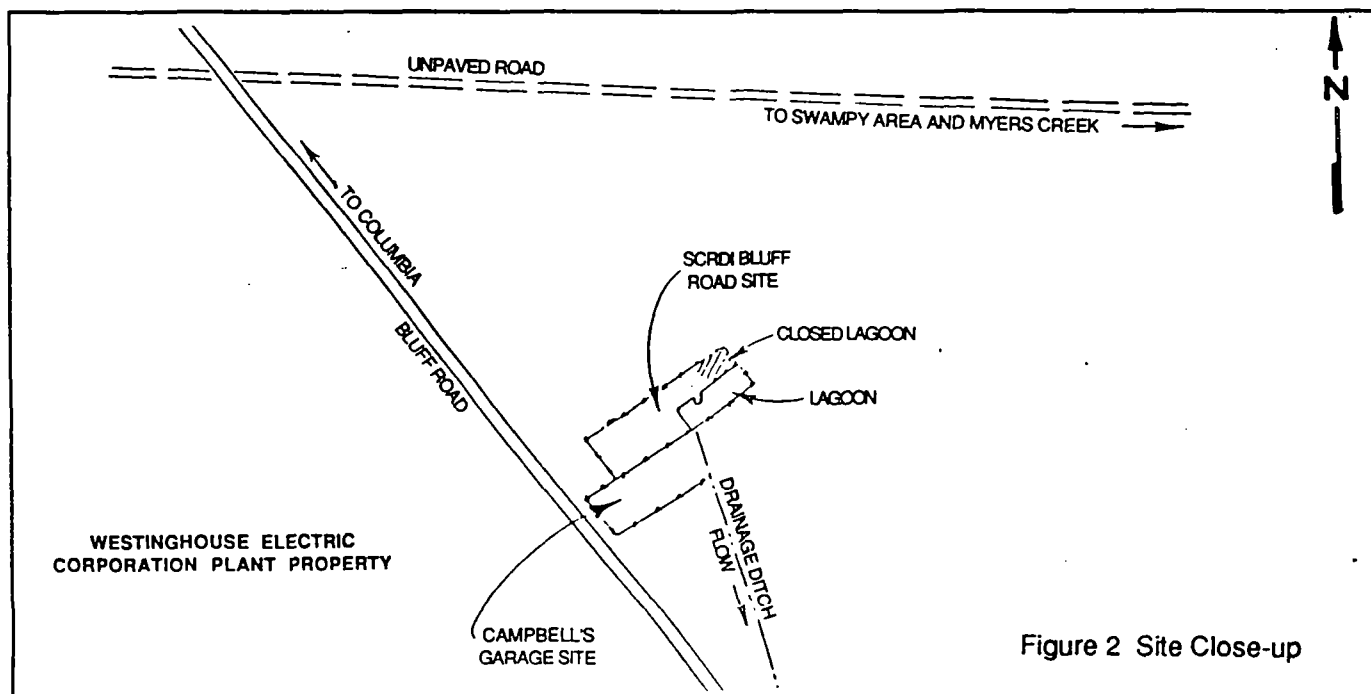


Figure 2 Site Close-up

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**For Further Information,  
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**Information Repository:**

Richland County Public Library  
Landmark Square Branch  
6864 Garners Ferry Road  
Columbia, SC 29209  
(803) 776-0855  
Contact: Mrs. Claypool

**MAILING LIST ADDITIONS**

To be placed on the mailing list for the SCRDI Bluff Road Site  
please complete this form and mail to:

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345 Courtland Street, N.E., Atlanta, GA 30365

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